July 2013
900764-001
Rev 02

TouchTunes Wireless Broadband - Installation Guide

About This Setup Guide

This setup guide is intended for TouchTunes Digital Jukebox Operators, as well as TouchTunes field service, customer support, and sales personnel.

Note: For the most up-to-date information, download the latest version of this guide from the Operator Dashboard

This setup guide includes the following sections:

- What is TouchTunes Wireless Broadband?
- TouchTunes Wireless Broadband Hardware Kit Contents
- Setting up TouchTunes Wireless Broadband
- Troubleshooting
- Contacting TouchTunes Support

Note: Make sure your jukebox has the latest software version installed before proceeding with the installation of the Wireless Broadband connection. If the jukebox isn't currently connected to a broadband connection, you can update its software by taking out the hard drive and placing it in another jukebox that does have a broadband connection, performing the software update, and then putting the hard drive back in its original jukebox. The minimum required software versions are: OpenStage 1.2.1-4, and Gen3 3.9.7-3.

What is TouchTunes Wireless Broadband?

TouchTunes Wireless Broadband is a service from TouchTunes that enables its operators to connect their jukeboxes to the Internet using a high-speed wireless connection.

All Virtuo jukeboxes require a high-speed Internet connection, and when equipped with high-speed Internet access, TouchTunes Gen 3 jukeboxes offer many features and advantages over Gen 3 jukeboxes with dial-up connections.

A high speed Internet connection provides Gen 3 jukeboxes with:

- Real-time customer access to the entire TouchTunes catalog
- Customer access to myTouchTunes from jukeboxes and access to personalized playlists
- Better integration with the TouchTunes Mobile App
- Faster data transfers and communications with the Operator Dashboard, including music downloads, settings modifications and Network Diagnostic System (NDS)
- Improved song recommendation quality
- Expanded advertisement capabilities
- Credit card reader functionality

TouchTunes Wireless Broadband Hardware Kit Contents

The TouchTunes Wireless Broadband hardware kit (600187-001) contains the following components:

	Item Description	Quantity	Part No.
A	Wireless USB 3G/4G Modem	1	700734-001
B	4G LTE Rogers SIM card	1	700735-001
C	Antenna	1	700739-001
D	Isopropyl Alcohol surface prep wipe	1	(included with antenna)
E	Antenna cable	1	(included with antenna)
F	USB cable extension	1	(under plastic modem tray)
G	Plastic cable clip	1	(under plastic modem tray)
	TouchTunes Wireless Broadband Installation Guide (this document)	1	900764-001

Figure 1 Contents of the modem box

Setting up TouchTunes Wireless Broadband

Setting up your Wireless Internet connection consists of two steps:

- Step 1 - Preparing the USB Modem and Antenna
- Step 2 - Installing and Configuring the Wireless USB Modem

Step 1 - Preparing the USB Modem and Antenna

1. Take the SIM card that was included in the box with the modem, and carefully snap the smaller SIM out of the bigger card, as shown.

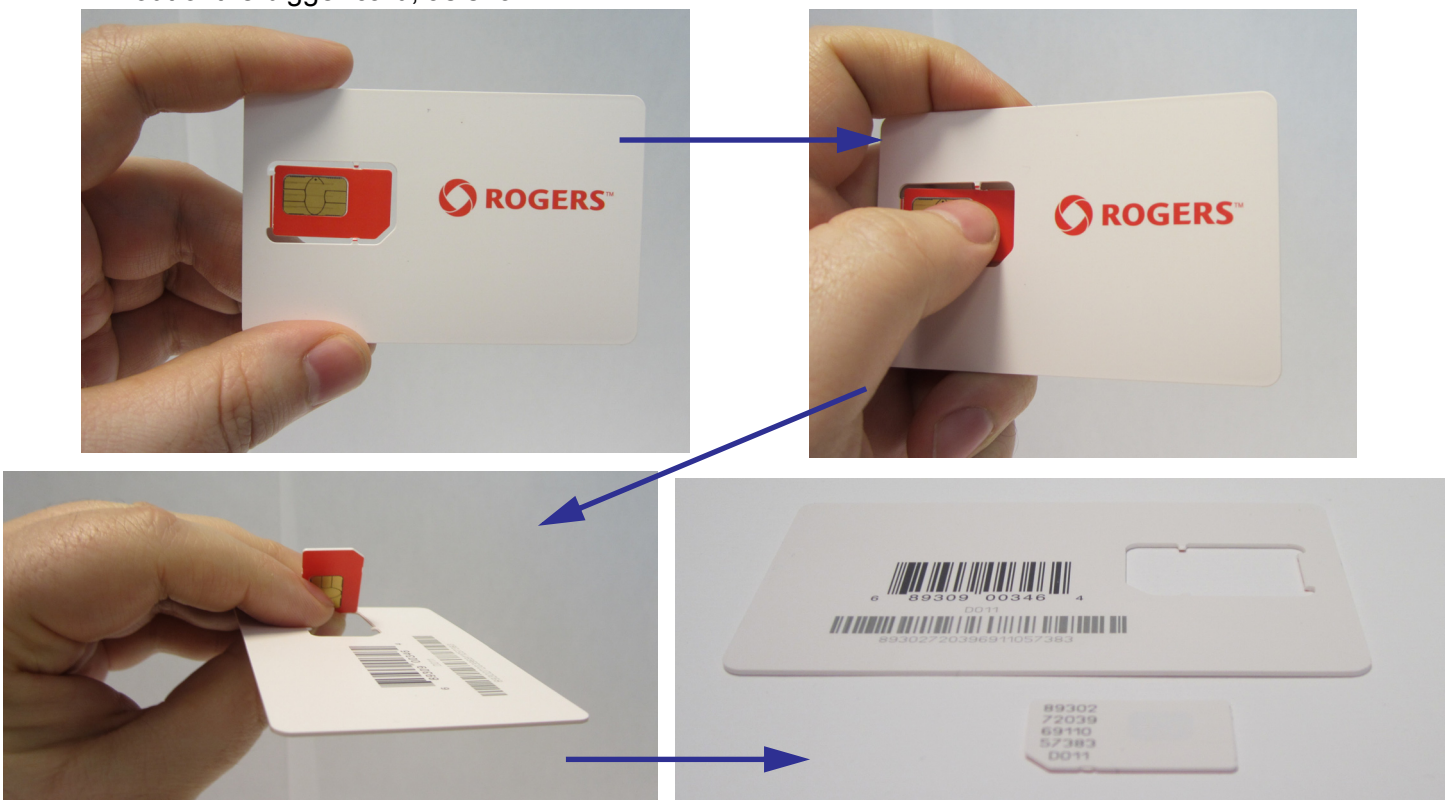


Figure 2 Separating the new SIM from its card

2. There's a serial number printed on the small SIM that also appears below a bar code on the bigger card. Copy this serial number somewhere you can easily find it again in the future: you may need it if you ever have to call TechLine about this jukebox's wireless broadband connection. You can also keep the bigger card for this same purpose.

Figure 3 SIM card serial number

3. Open the USB modem by sliding the cover in figure 4 upwards and then removing it.

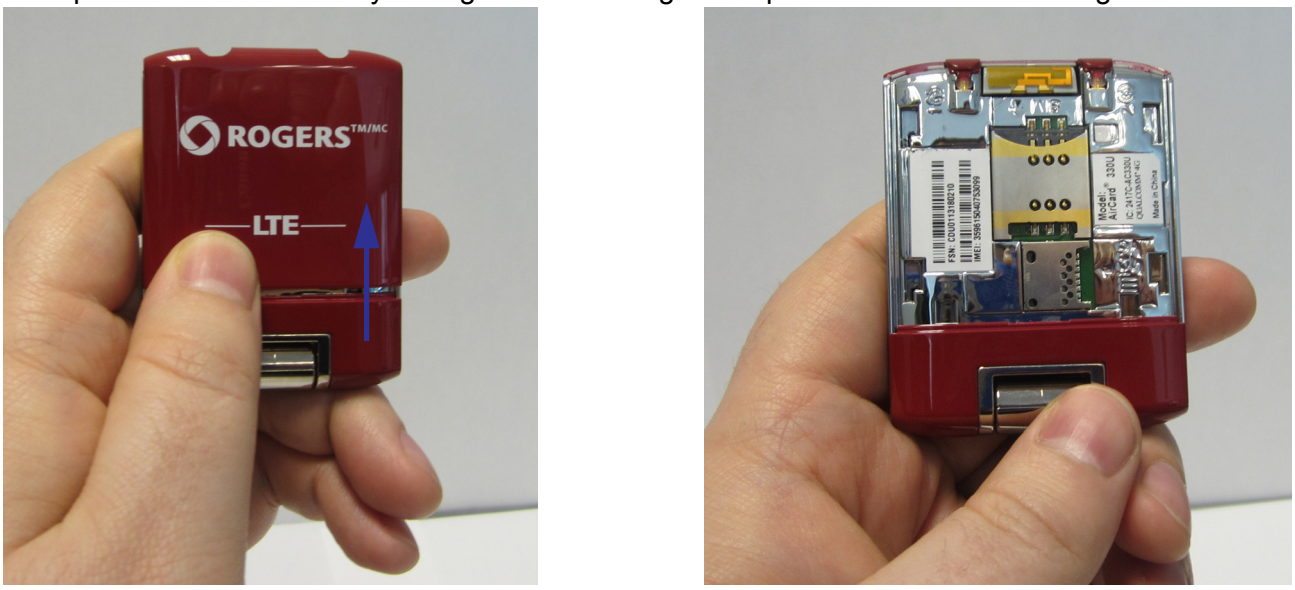


Figure 4 Opening the USB modem

4. Insert the small SIM card into the slot on the modem. Note the orientation of the SIM card. The side with the metal connectors should be face down, and the beveled corner should be in the top-left.

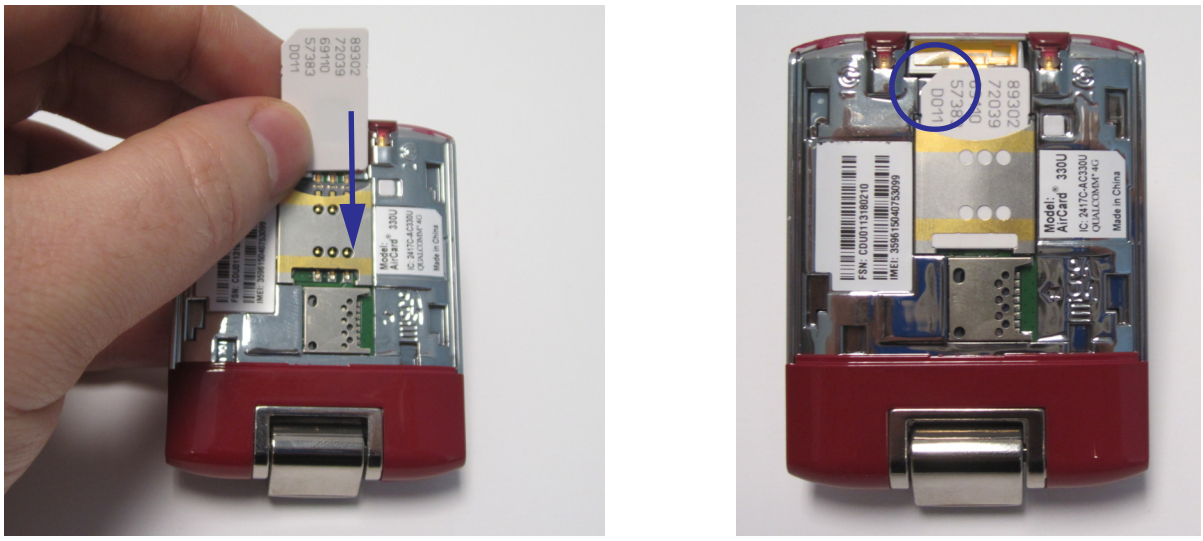


Figure 5 Inserting the new SIM

5. Connect the antenna cable that is included in your kit to the antenna connector marked with a '1' (see figure 6 below.) To access the connector, you must flip the protective tab that covers it open.

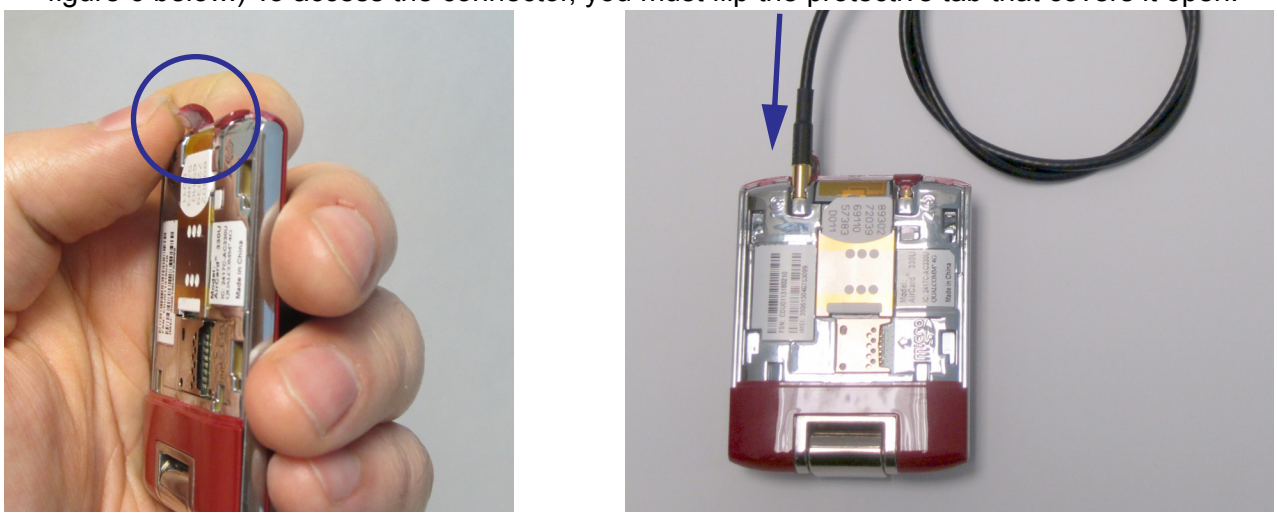


Figure 6 Connecting the Antenna cable

6. Slide and snap the cover panel back onto the modem.

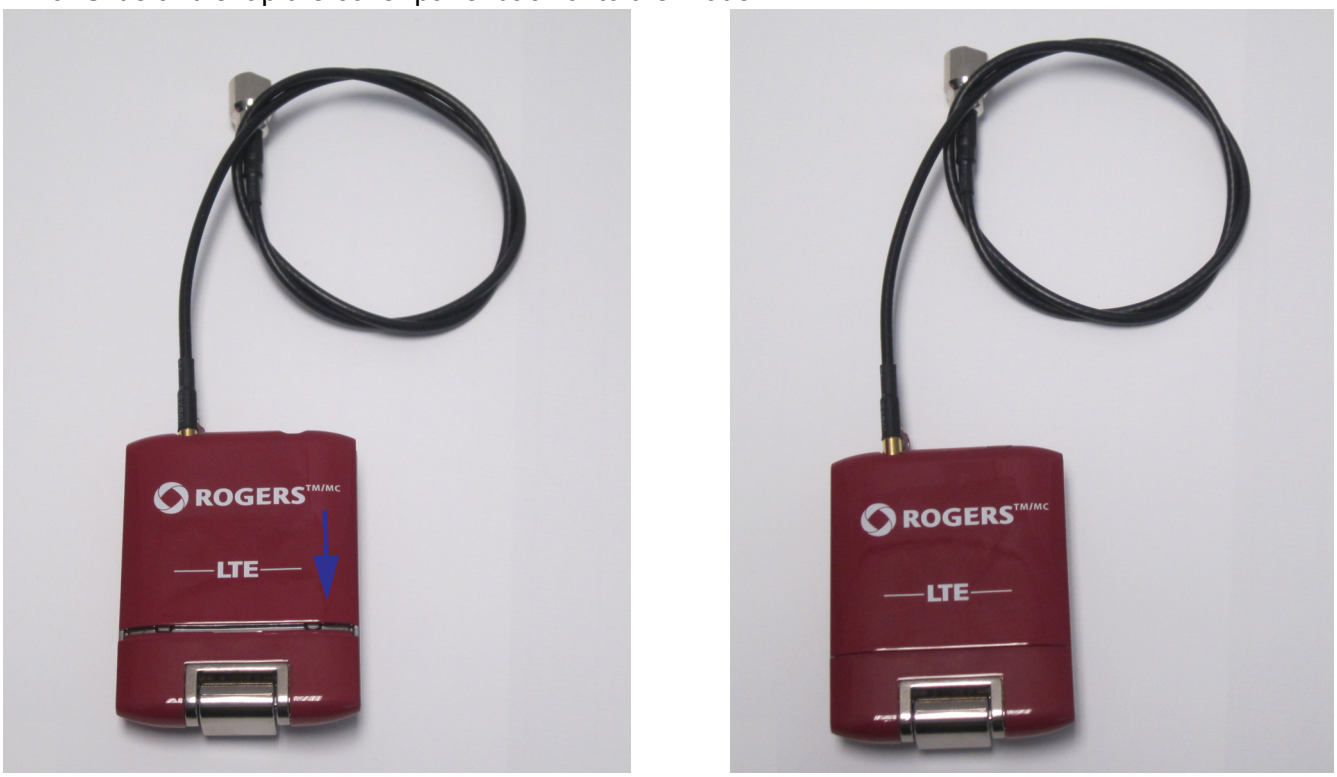


Figure 7 Closing up the modem

7. Connect the antenna to the other end of the antenna cable by pushing the smaller connector into the big one, carefully aligning the central pin from the big connector so it goes into the small hole on the small connector. Once the connectors are pushed-in together as far as they can go, fasten the two together using the screw part on the smaller connector.

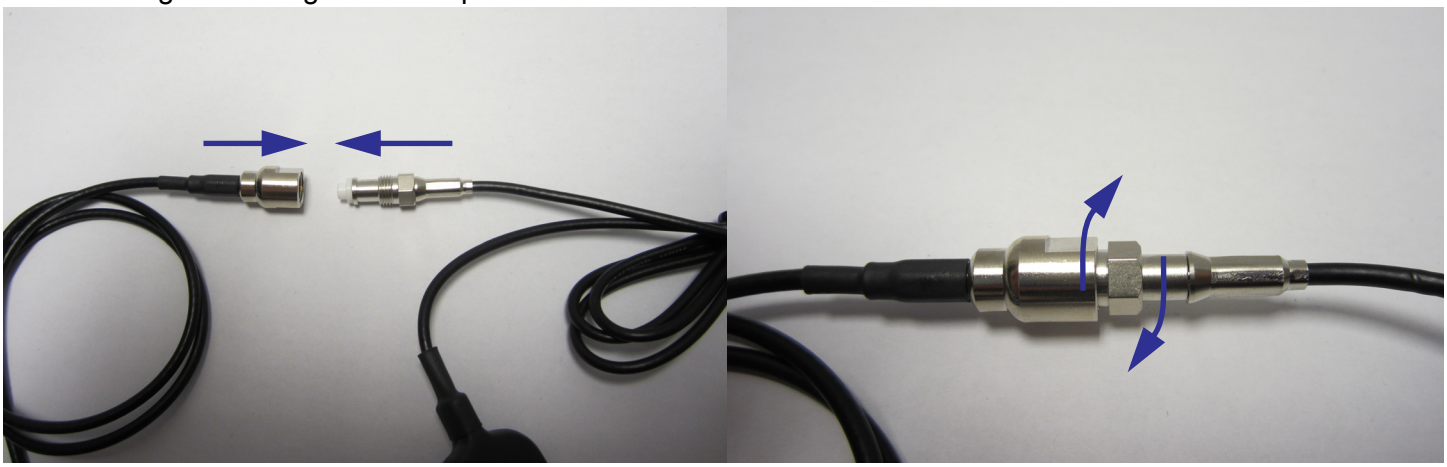


Figure 8 Connecting the antenna and antenna cable

Step 2 - Installing and Configuring the Wireless USB Modem

To install and configure your wireless modem

1. Remove any existing telephone line connections or previous USB wireless modems from the jukebox computer.
2. Press the **Manager** button on your jukebox's I/O board.
3. At the Operator menu, select **Diagnostic**.

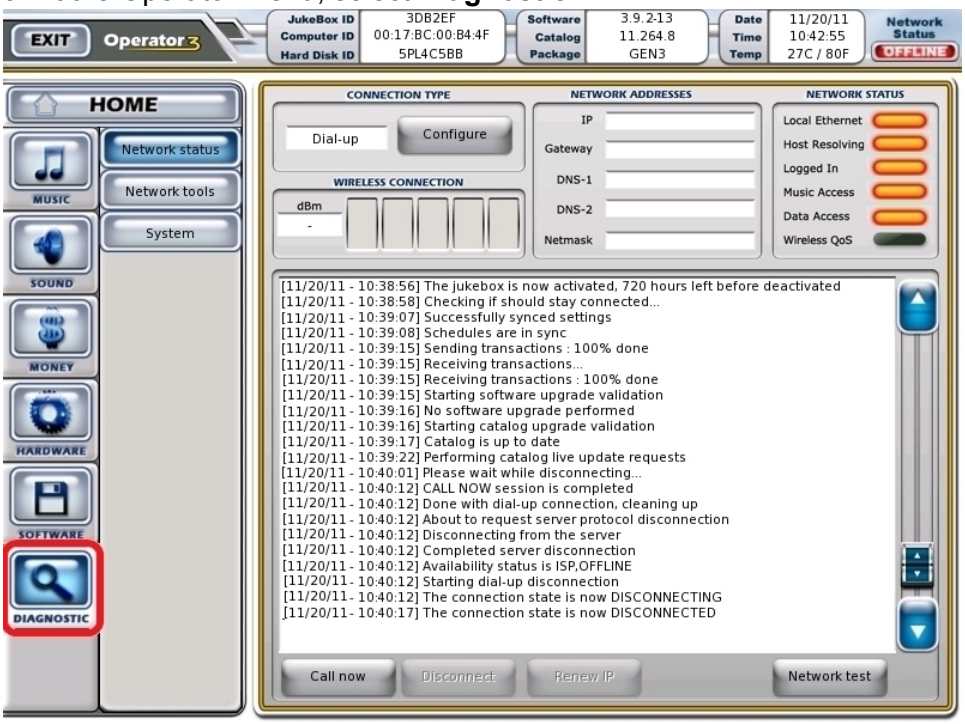


Figure 9 Selecting Diagnostic

4. Under CONNECTION TYPE, touch the **Configure** button.

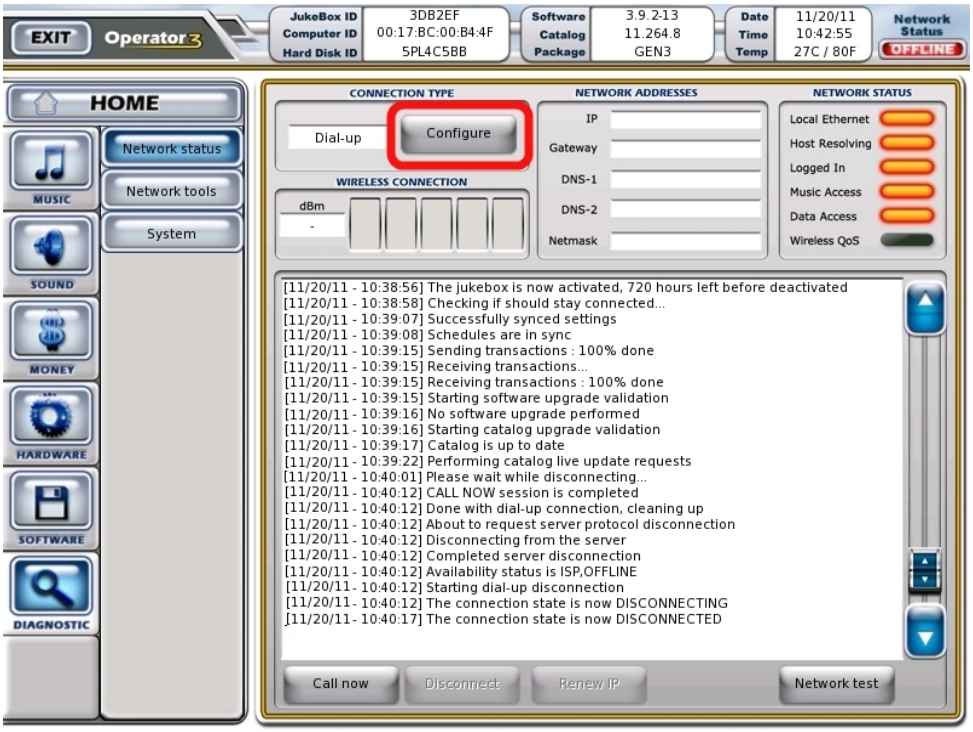


Figure 10 Selecting Configure

5. Under CONNECT WITH, touch **Broadband**, then under the HOST CONFIGURATION area, select **Wireless**.

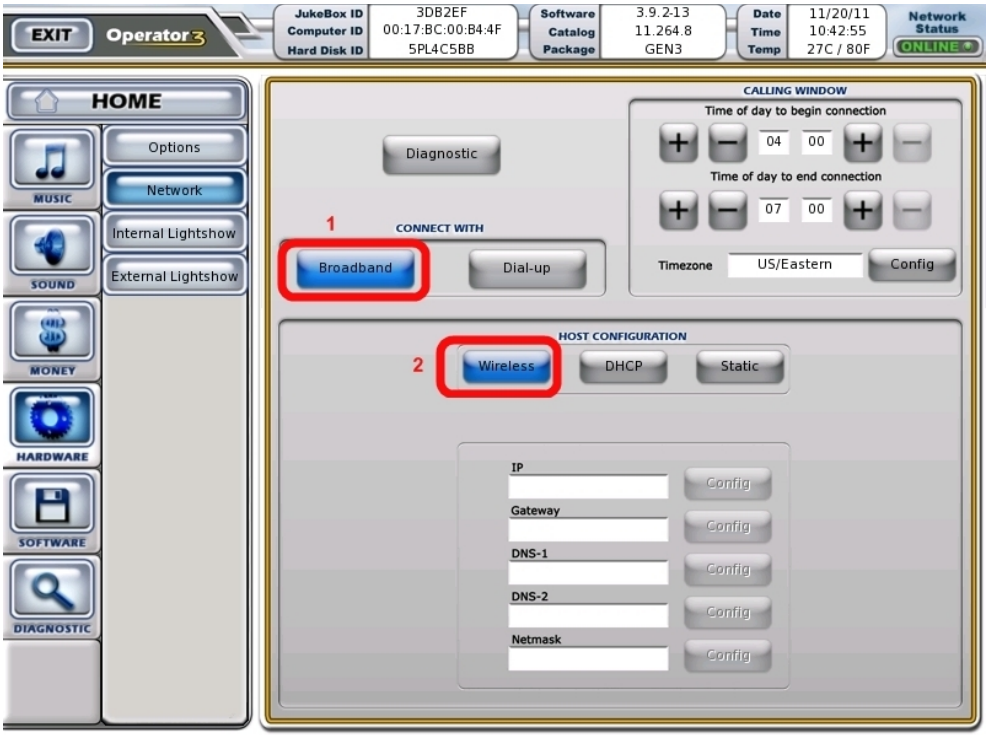


Figure 11 Selecting Broadband, then Wireless

6. Return to the **Diagnostic - Network Status** page by touching the **Diagnostic** button.

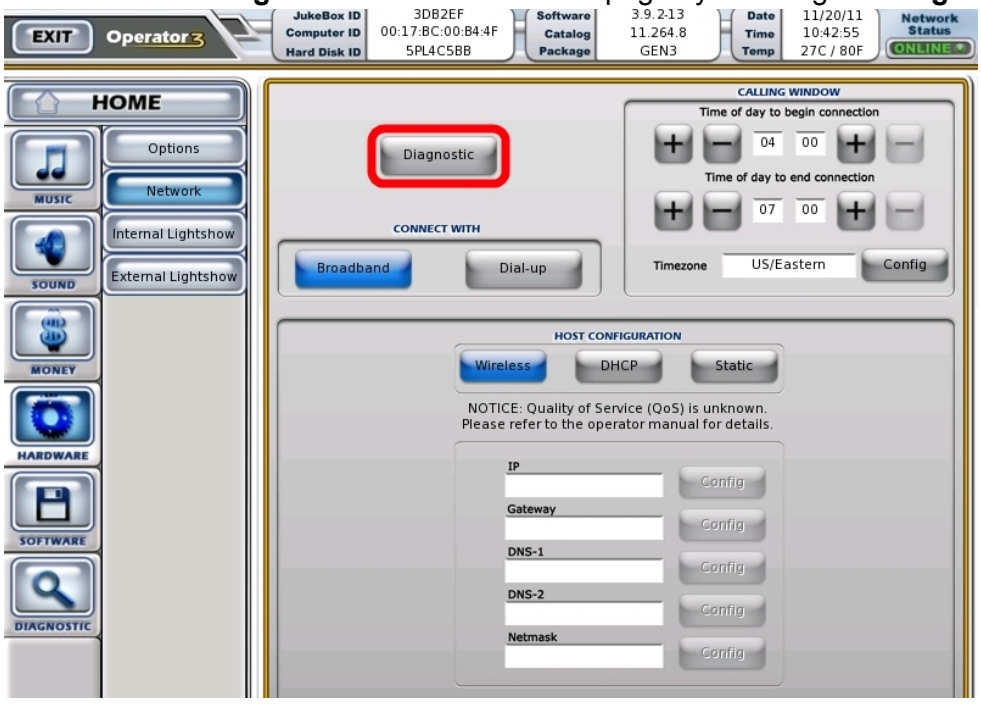


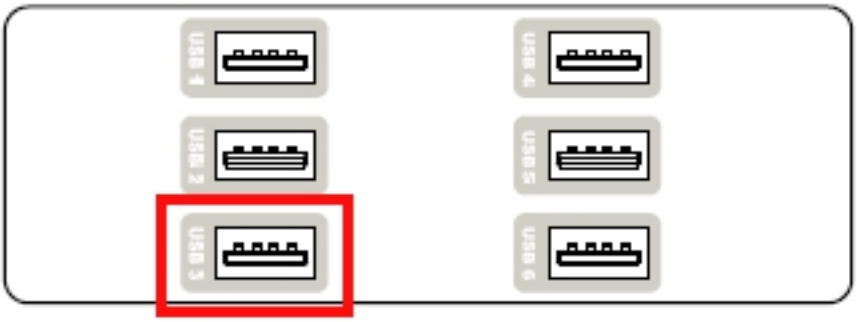
Figure 12 Returning to the Diagnostic - Network Status screen

7. Flip open the USB plug on the wireless modem and insert it into one of your jukebox's USB ports. For your convenience, your kit also contains a USB extension cable.

Figure 13 Flipping the USB connector

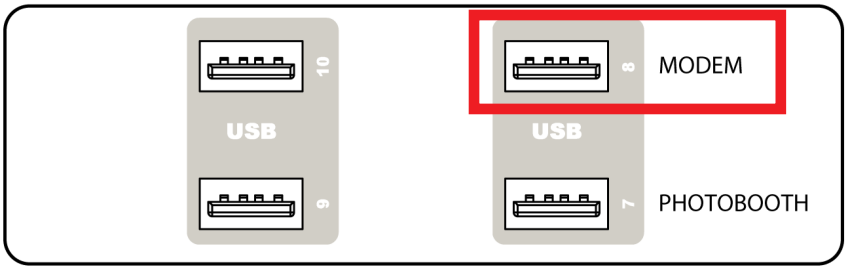
Note: On Virtuos, you must plug the modem into a specific port:

If your Virtuo computer has a group of 6 USB sockets on its right side-panel:



Plug your Wireless modem into USB Port #3

If your Virtuo computer has a group of 4 USB sockets on its right side-panel:



Plug your Wireless modem into USB Port #8 (labeled MODEM)

Figure 14 Plugging the wireless modem into the correct Virtuo USB port

Within a few moments, the modem will be detected by the jukebox and the wireless network.
You should see green bars and a **dBm** value under the WIRELESS CONNECTION area. Additionally, the network status LED for Wireless QoS should read either “4G LTE” (if your device is located in an area where this connection type is supported), or appear as solid green if your jukebox is in an area that supports 3G connections.

Note: If this LED is red or black, proceed to **Troubleshooting** (next page) then continue with steps 8 and 9.

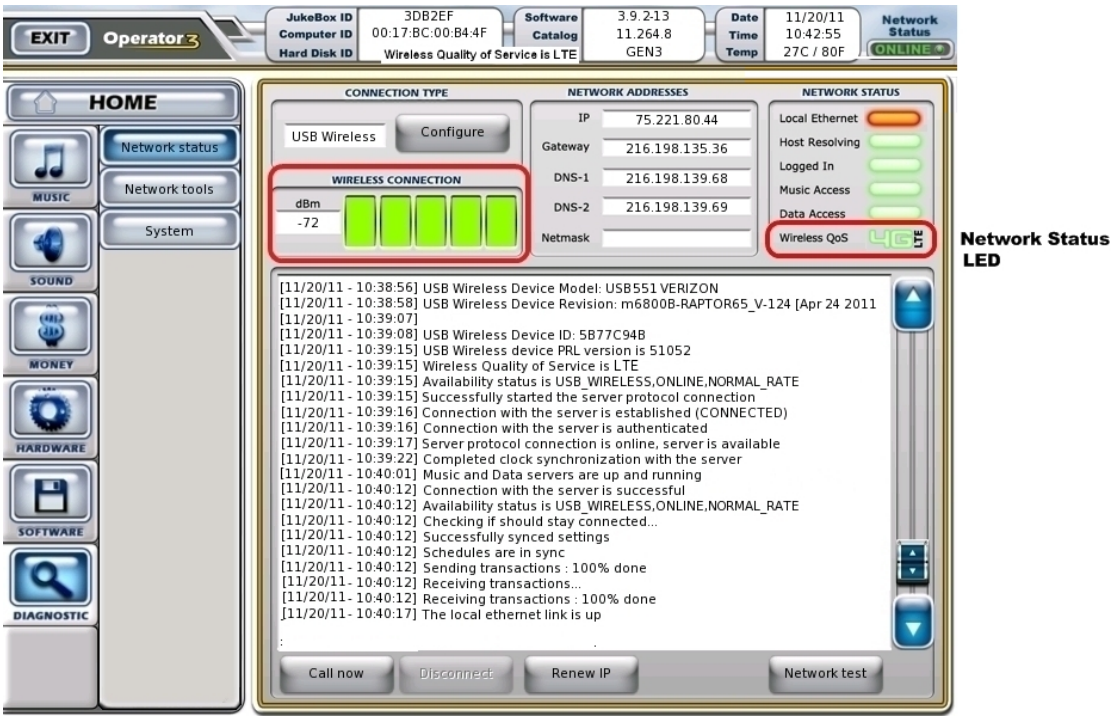


Figure 15 Evaluating the Quality of Service from the Network Status screen

8. To improve the wireless reception, place the antenna in a location as near to a window as possible. Ideally, you should attach the antenna directly to a window using its velcro pad. One half of the velcro pad is stuck to the antenna, and the other half has a backing that you must remove so the pad can stick to the window. An isopropyl alcohol wipe is provided for cleaning the window and provide a surface that the velcro pad can properly stick to.
9. Re-position the antenna as necessary so that you receive as strong and consistent a signal as possible.

Note: As well as the green bars, the **dBm** value is a valuable tool for establishing the wireless signal strength. A larger dBm value results in a better signal strength. Since the dBm value is measured in negative numbers, **the closer this value is to 0, the better the signal**. Thus, a value of -75 is superior to a value of -85.

10. Once the antenna is in place and providing the strongest signal you can get, route its cable outside the jukebox. Do not coil, gather or bunch up the slack in the cable and then tie it inside the jukebox, but instead, try to spread the extra cable between the jukebox and the antenna. This will lead to better reception and performance.

Troubleshooting

This section contains tips for resolving the most common installation issues with TouchTunes Wireless Broadband.

- If your Network Status LED is red
- If your Network Status LED is black

If your Network Status LED is red

If your Network Status LED turns red after you connect the wireless modem, it indicates that your modem is connecting to the TouchTunes Wireless Broadband service, but at a Quality of Service that is below recommended. The bars for WIRELESS connection may also be reduced in number and more yellow in color.

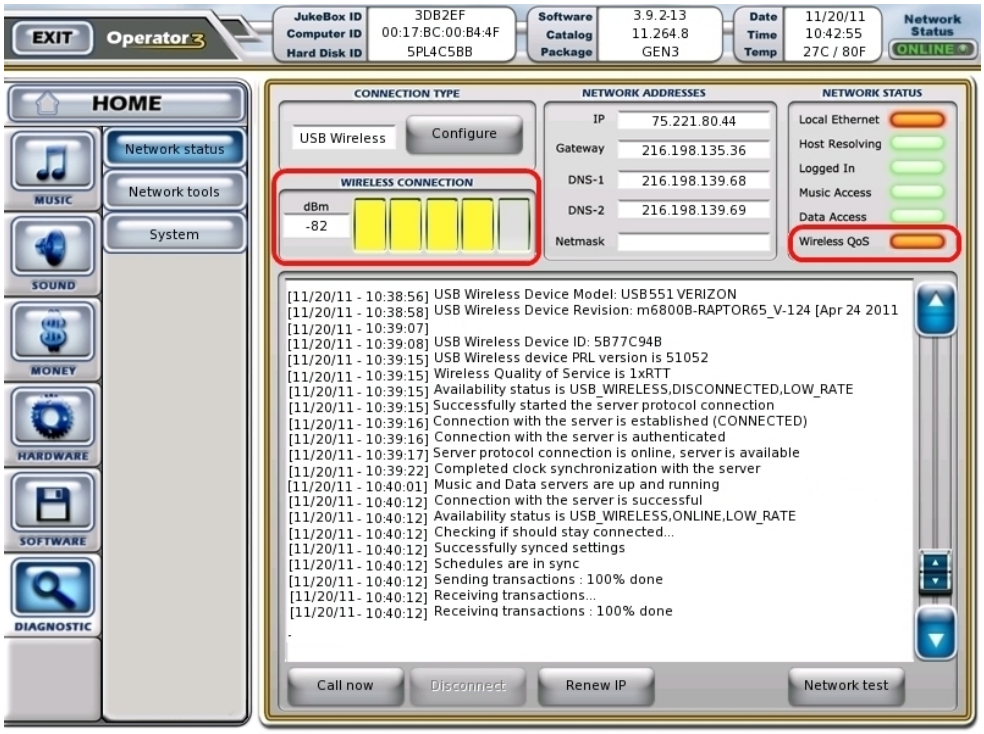


Figure 16 A lower than recommended Quality of Service

It is important to determine within the first few days of your contract whether or not the lower than recommended Quality of Service is temporary, due to a busy network, or if broadband speeds are generally not available in your area.

To improve the reception of the wireless signal, position the antenna at various positions and wait for 30 seconds in each position to see if the red LED for *Wireless QoS* becomes green.

If your QoS LED fails to turn green, TouchTunes recommends trying the wireless modem on a different jukebox.

If your Network Status LED is black

If your Network Status LED turns black after you connect the wireless modem, it indicates that your modem is not recognized by the jukebox as an officially supported TouchTunes Wireless Broadband modem. Although it is likely you are connected to your independent service provider with a high-speed connection, the jukebox cannot determine the connection speed. You can check to see for yourself if the connection speed is sufficient to operate the jukebox in broadband mode.

To measure the speed of your wireless connection on a Virtuo or on a Gen3+ jukebox:

1. Ensure that there are no paid songs playing, or in the jukebox's play queue (if you have background music playing, make sure it is set to be interrupted by paid plays.) You can skip songs by pressing the P3 button on your jukebox's remote control.
2. Search for an album that contains songs you know are not on the jukebox's hard drive (some songs may be on the hard drive even though they are not part of the jukebox's local favorites.) Your best bet is to search for the least popular or least known artist you can think of. Make sure you are at a screen where you are viewing all the songs on a particular album.
3. Unplug the USB wireless modem from your jukebox to remove its connection to the Internet.
4. Queue up two songs from the album you were viewing.
5. Verify that the songs do not start playing by waiting 10-20 seconds.
6. Plug the USB modem back into your jukebox to re-establish your connection to your Internet provider.

Note: Recall that on Virtuo jukeboxes, **you must plug the modem into a specific USB port** (see Figure 14 on page 8).

---

7. If the first song begins playing within a few seconds, and the second begins playing immediately after the first ends, then your Internet connection is fast enough to accommodate all the high-speed functions of your jukebox.

To measure the speed of your wireless connection on a Gen3 jukebox

1. Search for a song that you know will not be on the jukebox's hard drive. (One way to check is to unplug the modem from its USB port while you are looking at Super Search results: any songs that aren't on the hard drive will have a black background with text that reads "Request this song".)
2. Queue up that song. (This can only be done after re-connecting the modem, if you disconnected it at step 1.)
3. Go into the Operator screen.
4. Navigate to Diagnostic | Network status.
5. Look at the last few lines of the log.

6. Once the song you queued starts playing, the last line in the log should read “Download successful”. Look at the line above, which will look like this:

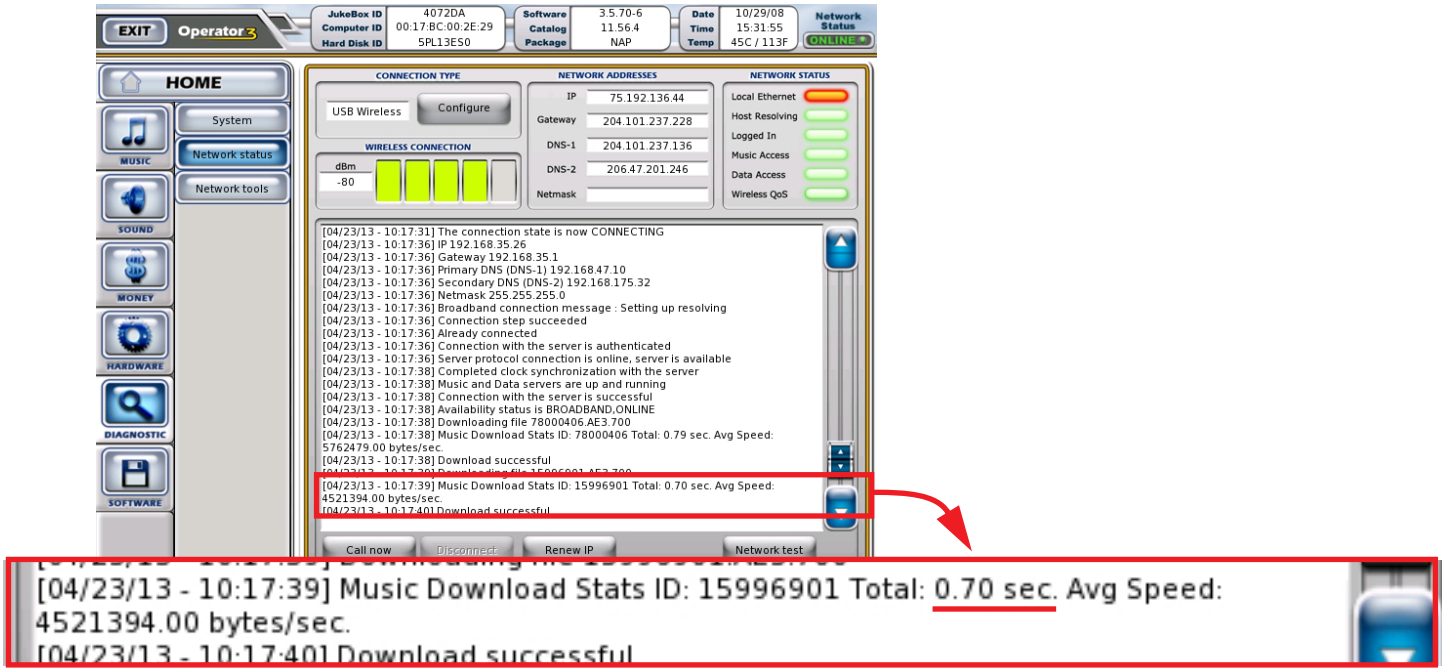


Figure 17 Song download time

7. The underlined number above is the time it took for the song download. If this number is higher than 15-20 seconds, it means that when users will queue up a song while no paid music is playing, they will have to wait for more than 15-20 seconds before their song plays. It also means other network operations (myTouchTunes, mobile app, credit card transactions) may be slow or delayed, leading to a degraded user experience.

Contacting TouchTunes Support

If you need help with or have questions about this document, contact TouchTunes by:

- Using the e-mail links on the Contacts page on the TouchTunes Dashboard at https://operator.touchtunes.com
- Calling TouchTunes 24/7 Service Hotline at 847-353-1954

To help us assist you more effectively with problem reports, the following information may be required when contacting TouchTunes Support:

- Jukebox ID and model (e.g., Virtuo, Ovation II, MX-1).
- The serial number of any component you believe to be defective.
- The date/time of the problem.
- Actions performed immediately before the problem occurred.

TouchTunes Interactive Networks 400 Sainte Croix Avenue, Suite 200 E Montreal, Quebec H4N 3L4 Canada	**TouchTunes Interactive Networks** 3455 Salt Creek Lane, Suite 100 Arlington Heights, IL 60005 USA	**Technical Support** 847-353-1954 techsupport@touchtunes.com

Copyright © 2013 TouchTunes Interactive Networks